Exhibit 5

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY
CAMDEN VICINAGE

IN RE: VALSARTAN, LOSARTAN, AND IRBESARTAN PRODUCTS LIABILITY LITIGATION	MDL No. 2875

EXPERT REPORT OF DAVID L. CHESNEY, MSJ

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I. EXECUTIVE SUMMARY

This declaration communicates the opinions, and basis therefore, of David L. Chesney (hereafter, "I" or "my"), based upon review of certain specified documents disclosed in the above captioned matter.

My qualifications and background are specified in detail herein. In summary, I hold a Bachelor of Arts in Biology (California State University, Northridge) followed by three years full time graduate study in Biology (California State University, Northridge and San Diego); a Master of Science in Jurisprudence from Seton Hall University School of Law (concentration in pharmaceutical and medical device law), and over 49 years' FDA regulatory experience, 23 of which were in the FDA as an Investigator, Supervisory Investigator, Director of Investigations and District Director for the FDA in which I concentrated primarily on Good Manufacturing Practice (GMP) and Good Clinical Practice (GCP) inspection and enforcement in the pharmaceutical and medical device industries. Subsequently I have worked as a GMP and GCP consultant worldwide, 21 years in charge of a large compliance consultancy and nearly six years as an independent consultant and founder of a sole practitioner consulting firm.

The concept of adulteration under the Federal Food, Drug and Cosmetic Act is complicated and requires the application of sound scientific and regulatory judgment. One way a product may be deemed adulterated is by failure to comply with the requirement that it be manufactured under "current good manufacturing practice" ("CGMP" or "GMP")[1]. Whether a product meets this standard calls for a multidisciplinary approach, which is the approach used by the FDA itself in bringing enforcement actions under GMP.

[1] *See* 21 USC § 351(a)(2)(B) and 21 CFR §§ 210 and 211.

GMP is deemed a minimum standard, not a "gold standard" or "best practice". For a GMP requirement to be binding, it must establish what is minimally necessary[2]. Often, this is a judgment call, due to the diversity of products, processes and risk factors involved in pharmaceutical manufacturing. The field does not lend itself to simplistic requirements that are easily interpreted and applied. Since judgment is involved in GMP determinations, occasionally reasonable and well-informed people may disagree on the same fact set. Such disagreements may be resolved by reference to precedents in common law, guidance from the FDA, and trade association publications.

Key findings and opinions detailed herein include:

[redacted]

[2] *See* 21 CFR § 210.1(a).

[redacted]

[redacted]

[redacted]

[redacted]

[6] On the FDA website at https://www.fda.gov/drugs/drug-safety-and-availability/recalls-angiotensin-ii-receptor-blockers-arbs-including-valsartan-losartan-and-irbesartan, the agency poses the question "Should I continue taking my medication even if it has been recalled?" and answers it by stating "Yes. Because ARBs treat serious medical conditions, continue taking your current medicine until a doctor or pharmacist gives you a replacement or a different treatment option."

[7] *See* 21 § USC 351(b).

[8] *See* 21 § USC 351(c).

[redacted]

II. BACKGROUND AND QUALIFICATIONS

A. Current Position

I am the Principal and General Manager of DL Chesney Consulting, LLC, a pharmaceutical and medical device regulatory consulting firm. I provide consulting services to executive management in the pharmaceutical, biotechnology and medical device industries in the areas of Good Manufacturing Practice ("GMP"), Medical Device Quality System Regulation ("QSR"), Good Clinical Practice ("GCP"), data integrity, and Pharmacovigilance/Medical Device Reporting compliance. My services include: Auditing company operations for compliance with Good Manufacturing Practice (GMP) and Good Clinical Practice (GCP) compliance; advising on U.S. Food and Drug Administration ("FDA") inspection readiness and responses to FDA inspection observations; conducting assessments of quality assurance systems and Quality Units; assisting legal counsel and company leadership in connection with FDA inspection outcomes, post-inspection correspondence and meetings; developing and implementing remediation strategy; and providing training in GMP, QSR and GCP compliance areas, data integrity, and FDA inspection

readiness, including educating executive management about their compliance responsibilities and FDA expectations of company leadership teams. My current curriculum vitae is attached to this declaration as Exhibit A.

B. FDA Experience

Prior to becoming a consultant, I was employed by the FDA for 23 years. From 1972 to 1977, I worked as an Investigator in the FDA's Northeast Region, Boston District Office, where I conducted a wide range of investigations and inspections for the FDA, with an emphasis on drugs, biologics, Good Manufacturing Practice (GMP), Good Clinical Practice (GCP), and medical devices. From 1977 to 1982, I served as a Supervisory Investigator in the FDA's Boston District office, where I continued to conduct inspections and also supervised other FDA investigators. I evaluated inspection reports prepared by my subordinates and made initial recommendations for FDA in response to inspection findings. I also managed the biologic, medical device, and bioresearch monitoring (GCP) programs for the Boston District Office.

From 1982 to 1988, I was the Supervisory Investigator in Charge of the Portland, Oregon FDA office in the Pacific Region, Seattle District. In this role, I directed and conducted inspections and criminal investigations, and supervised inspection and investigative activities for the FDA in Oregon and southern Idaho. This position was a lateral transfer from the Boston office into essentially the same role, except that I was geographically stationed in Portland, Oregon and as such was the most senior FDA official in the state at that time. I also served as a District Office-level Evidence Development Instructor, training new hires in proper inspection procedure and regulatory case development.

In 1988, I was promoted to Director of the Investigations Branch for the FDA's Philadelphia District, Mid-Atlantic Region in Philadelphia, Pennsylvania. I directed a staff of approximately 50 FDA Investigators stationed in Pennsylvania and Delaware, and participated in

developing the drug pre-approval inspection program. I also served as an Evidence Development Instructor for the FDA's new hire training program at the national level. In 1990, while serving as Director of the Investigations Branch in the Philadelphia District, I completed and graduated from the FDA/Office of Regulatory Affairs Executive Development Program, serving rotational assignments in FDA headquarters and field locations over the course of approximately a year, in addition to my regular duties.

In 1991, I was promoted to the position of District Director of the FDA's San Francisco District Office. In that capacity, I supervised approximately 180 FDA employees and managed all the FDA operations of that office. At that time, the San Francisco District Office was responsible for all the FDA's inspection, compliance, laboratory analytical, public affairs, federal-state relations and administrative activities in Northern California, Nevada, Hawaii, and the Pacific Trust Territories. I represented the FDA before industry association meetings and academic groups as an expert on FDA inspection and enforcement matters. I coordinated federal–state enforcement activities with FDA counterpart agencies at the state level. I also served on the Field Advisory Committees to the Center for Biologics Evaluation and Research ("CBER"), the Center for Veterinary Medicine ("CVM"), and the Office of Chief Counsel. I continued to serve as an instructor for the FDA's basic law and evidence development course at the national level.

Over the course of my career at FDA, I personally participated in over 200 site inspections and had supervisory responsibility for hundreds of additional site inspections. Prior to the creation of FDA's Office of Criminal Investigations, I took part in investigations of cases of deliberate violations, consumer product tampering, drug counterfeiting and anabolic steroid trafficking. In addition, I served for over ten years as an Evidence Development instructor for the FDA/Office of Regulatory Affairs' "FDA Law and Evidence Development" training course which all new hire

FDA Investigators and Laboratory Analysts take at some point in their first or second year of employment. As a Supervisory Investigator, for approximately 11 years, divided between the New England and Seattle regions, I personally reviewed hundreds of Establishment Inspection Reports and made initial recommendations as to the course of action I thought the evidence warranted. In some instances, I coordinated with FDA and Department of Justice colleagues, and with United States Attorneys' offices on the filing of judicial actions resulting from inspections, and in a few instances, I testified as a government witness in civil or criminal trials resulting from inspections.

Later, as a Director of Investigations Branch and District Director, I continued to review establishment inspection reports and take part in case development and regulatory action decision-making. As a District Director, for five years, I was responsible for making the final District Office level recommendation based on such reports. As a District Director, I signed over 400 Warning Letters and held many Regulatory Meetings with firms to resolve inspection-related matters. Through this experience, I developed in-depth expertise on the FDA enforcement process, including the various regulatory actions which the FDA is empowered to take based on findings noted during site inspections.

C. Prior Consulting Experience

In July of 1995, I joined the Atlanta, Georgia office of Kemper-Masterson, Inc., a consulting firm based in Belmont, Massachusetts. The firm was acquired in December 1997 by Parexel International, LLC ("Parexel") of Waltham, Massachusetts, and my position was transferred to Parexel. I continued working for Parexel from 1997 until July 2016. During that period, I served in two similar capacities, first for 19 years as Vice President and Practice Lead, Strategic Compliance Services, and briefly as Vice President and Senior Subject Matter Expert and Advisor, the latter as part of succession planning to aid my successor in making the transition to a leadership role. In these capacities, I advised clients worldwide on a variety of FDA and other

health regulatory authority matters, including the prevention of, and responses to, regulatory enforcement sanctions. I also represented clients in communications with the FDA and other health regulatory authorities, advised senior client management officials and legal counsel on compliance matters, trained clients in compliance topics, and provided executive-level briefings on compliance and quality management issues.

In addition to providing direct client services, I managed a group of over 50 consultants who functioned as Parexel's subject matter experts in compliance strategy throughout the U.S. and Europe. This group focused on GMP, GCP, QSR (medical device GMP), Medical Device Reporting (21 CFR § 803) compliance, drug safety and post-marketing reporting requirements, risk management, FDA communications and interactions, responses to FDA enforcement sanctions, data integrity assessments, and management controls for regulatory compliance.

D. Educational Background

I hold a Master of Science degree in Jurisprudence, concentrating in pharmaceutical and medical device law, from Seton Hall University School of Law, granted in 2019. In 2008, I received a Certificate in Healthcare Compliance from Seton Hall University School of Law. I also hold a Bachelor's degree in Biology from California State University, Northridge, California. Additionally, I completed three years of full-time graduate study in Biology at California State University, with time divided between the Northridge and San Diego campuses.

In addition to the education described above, over the course of my FDA career, I completed many specialized FDA in-service training courses, including, but not limited to:

a. Pharmaceutical Manufacturing, Massachusetts College of Pharmacy, Boston;

b. Pharmacology and Experimental Therapeutics, University of Pittsburgh Medical School;

c. Non-Clinical Bioresearch and Toxicology, National Center for Toxicological Research, Jefferson, Arkansas;

d. Immunohematology and Blood Banking Practices, National Institutes of Health, Bethesda, Maryland;

e. Interview and Interrogation Techniques, John E. Reid and Associates, Chicago, IL;

f. FDA Office of Regulatory Affairs Executive Development Program, 1990-91 (among my rotational assignments in this program I served for a period of time as Acting Deputy Director of the FDA's Office of Enforcement, a key enforcement policy arm of the agency, and various other headquarters and field assignments, including Acting District Director, Seattle District Office); and

g. Various other FDA-program related and management-oriented training programs.

E. External Professional Involvement

I have served as guest faculty for the Maine Regulatory Training and Ethics Center (MeRTEC), affiliated with the University of Maine School of Law, Portland, Maine. I am also a faculty member for the Parenteral Drug Association's Training and Research Institute, and a *pro bono* instructor for the Food and Drug Law Institute's "Introduction to Drug Law" and other continuing education programs for the legal profession and affiliated industry personnel. I am an active member of the Regulatory Affairs Professionals Society. I have previously served on the Board of Directors of the FDA Alumni Association. In addition, I am a member of the external Advisory Committee for GXP Quality Systems, LLC, an FDA compliance consultancy headquartered in The Woodlands, Texas.

F. Speaking and Publishing

I have been a frequent speaker at a wide array of industry seminars and professional meetings for more than 30 years. Venues where I have been a featured speaker include but are not limited to both national level and chapter meetings of the Parenteral Drug Association, the International Society for Pharmaceutical Engineering, Pharmaconference, Inc., the Food and Drug Law Institute, FDA News, the International Pharmaceutical Academy (Canada), the American Society for Quality, the Massachusetts Biotechnology Council, Compliance OnLine, and several other similar trade and commercial conference entities. I have also twice served as an invited guest speaker at internal FDA training activities subsequent to my service at the agency. I have authored articles in several journals and newsletters, and co-authored Chapter 15, "Review of FDA Inspections and Related Regulations" in the Food and Drug Law Institute textbook "A Practical Guide to FDA's Food and Drug Law and Regulation" [9].

G. FDA Awards and Recognition

In 1990, I received the FDA Award of Merit, the FDA's highest award for individual achievement, for my work coordinating a major investigation involving deliberate contamination of imported produce sent to the United States. I have also received many other FDA awards for my service at the Agency.

H. Prior Testimony

My experience as a sworn witness began in 1974, and my records do not always reflect precise case identification. The following is a summary including the details I can recall or of which I have a record:

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[9] Tetzlaff, Ronald F. and Chesney, David L., "Review of FDA Inspections and Related Regulations", Chapter 15 of "A Practical Guide to FDA's Food and Drug Law and Regulation", Food and Drug Law Institute, Washington, DC (republished several times since 2004, including the current 2021 version).

APPROX. DATE	MATTER	ROLE
Nov. 1974	*US v. Neil Vermouth, et al.*, United States District Court for the District of New Hampshire. 1969-1974 FDLI Jud. Rec. 310	US Govt. prosecution witness
1975	*US v. Crugnale Bakery*, USDC D. RI, 1975	US Govt. prosecution witness
1976	*US v. Ace Baking Co.*, USDC D. MA 1976	US Govt. prosecution witness
1985	*US v. Priority Products et.al.*, US Court of International Trade, August, 1985, 615 F. Supp. 593	US Govt. prosecution witness
2005(?)	*Alpha Therapeutic Corp. v. Cigna, Los Angeles*, CA Insurance non-payment of claim; represented Alpha	Fact witness and expert witness/deponent
2006(?)	Wrongful termination case, *Los Angeles, CEO and VP of Regulatory Affairs v. Alpha Therapeutic Corp*	Expert witness/deponent
July 2018	*Akorn, Inc. v. Fresenius Kabi AG, et. al.*, C.A. No. 2018-0300-JTL, Court of Chancery for the State of Delaware	Expert witness/deponent and live court testimony
Oct. 2021, continuing	Contractual dispute between two pharmaceutical companies over cost recovery from a recall alleged to have been necessitated by GMP deviations at the contractor.	Deposed on October 15, 2021, expert report prepared; matter still currently ongoing.

III. Compensation

I am being compensated at the rate of $500.00 per hour for all work conducted in connection with this case.

IV. REGULATION OF DRUG MANUFACTURING

A. Responsibilities of the Food & Drug Administration

The Food and Drug Administration (FDA) is an agency of the Department of Health and Human Services. It is both a science based regulatory agency and a law enforcement agency. The FDA is responsible for enforcing several federal laws, foremost among them the Federal Food,

Drug and Cosmetic Act (hereafter, FDCA or "the Act"), 21 USC § 301, *et seq.* The FDCA regulates *products*, not medical services such as the practice of medicine, dentistry, pharmacy, or other health care professions. The products regulated by the FDA under the FDCA and other laws include human and animal foods (except certain red meats and poultry regulated by the USDA), human and veterinary drug products, human and veterinary medical devices, human biologics (which are dually regulated, by both the FDCA and the Public Health Service Act § 351), human cellular and tissue based products for transplantation, cosmetics, and tobacco products.

The FDA organization is complex and many layered. Generally, at the headquarters level there are product-oriented "Centers" for Food Safety (which also includes cosmetics), (human) Drugs, Veterinary Drugs, Medical Devices, Biologics and Tobacco. Inspections may be conducted by any duly authorized FDA employee, but the great majority of inspections are conducted by employees of FDA's Office of Regulatory Affairs, whose personnel are stationed at offices distributed throughout the United States, Puerto Rico and in certain foreign office locations. These employees generally specialize in one of the FDA's "program" areas, many of which follow product lines (such as medical devices), others of which are multi-product, such as import enforcement.

There are many FDA counterpart agencies throughout the world. It has been my experience both in and out of the agency that the FDA is generally considered to be the preeminent agency of its type in the world. For many years, other agencies have looked to the FDA to set the standard for rigorous yet fair regulation.

While the FDA primarily relies upon drug manufacturers to voluntarily follow the law, keep truthful records, and make required reports, the agency continuously polices the industry to ensure that companies are following the law, and when necessary, the FDA takes enforcement

action to bring about correction or punish violators. The agency continuously uses enforcement discretion and risk analysis in deciding which potential violations to actively pursue, when to take action, and what type of action is necessary to protect the public health and prevent false and misleading claims. This requires the application and careful balancing of scientific, policy and legal judgment, and thus involves multiple agency components and individuals in any specific case that arises.

B. Federal Food, Drug and Cosmetic Act (FDCA)

The FDCA is an extraordinarily complex and lengthy statute with an extensive history. Among many other things, the FDCA establishes definitions for each type of regulated product, relying to an extent (though not exclusively) on the *intended use* of the product as determined by claims made in its label and accompanying labeling [*see* 21 USC § 321, *et seq.*]. The FDCA also establishes what constitutes adulteration and misbranding of regulated products, establishes categories of products which require FDA approval prior to marketing, and lists a long series of prohibited acts for which criminal charges may be brought to punish violators [*see* 21 USC § 331, *et seq.*]. The FDCA also provides for seizure of violative products [*see* 21 USC § 334], and for injunctions to be sought when necessary to restrain ongoing violations of the Act [*see* 21 USC § 332]. Short of judicial action, the FDCA provides that the FDA may deal with minor violations by a written notice of warning [*see* 21 USC § 336].

The FDCA empowers the FDA to promulgate regulations to promote its efficient enforcement [*see* 21 USC § 371(a)], and to conduct factory inspections and investigations for purposes of enforcement, subject to certain statutory limitations [*see* 21 USC § 374]. FDA regulations are codified in Title 21 of the Code of Federal Regulations ("21 CFR").

A primary way the FDA enforces the Act is through inspections, which may be unannounced or pre-announced in certain cases, subject to agency discretion. Most commonly,

within the United States and its Territories, inspections are unannounced, whereas inspections conducted outside the United States are almost always pre-announced, since the agency's statutory inspection authority does not extend beyond US borders. The FDCA prescribes the scope, limitations and procedures FDA Investigators must follow to conduct a lawful inspection within the United States [*see* 21 USC § 374(a)]. At the conclusion of an inspection, the Act requires that the employee(s) conducting the inspection leave a report of any observations of adulteration of products involving direct contamination or danger to health. By policy, as opposed to statutory mandate, FDA also includes on the report most other types of observations of potential violations, even if they do not involve direct contamination or a health hazard. This report is known as the List of Inspectional Observations, Form FDA-483. Most industry and FDA personnel commonly refer to the form simply as "the 483". Hereinafter, references in this declaration to "FDA-483", "the 483" or just "483" therefore mean the List of Inspectional Observations issued at the conclusion of an inspection. Also as a matter of policy, and for the sake of operational consistency, FDA generally follows the same inspection approach during foreign inspections as is used for domestic inspections, with the exception of issuance of the "Notice of Inspection" (form FDA-482) which is only used domestically, as required by the FDCA.

FDA policy makes it clear that FDA-483 observations are not final agency determinations of non-compliance and are subject to further agency review and vetting. The FDA-483 includes the following preprinted disclaimer on its reverse side: "*This document lists observations made by the FDA representative(s) during the inspection of your facility. They are inspectional observation, and do not represent a final agency determination regarding your compliance. If you have an objection regarding an observation, or have implemented, or plan to implement corrective action in response to an observation, you may discuss the objection or action with the FDA*

representative(s) during the inspection or submit this information to FDA at the address [on the form]."

FDA's policy is that observations listed on a 483 should be:

"1. Each observation should be clear and specific.

"2. Each should be significant. Length is not necessarily synonymous with significance.

"3. Observations should not be repetitious.

"4. The observations should be ranked in order of significance.

"5. All copies of the FDA-483 … should be legible."[10]

The FDA also instructs its Investigators "These observations are made when in the investigator's "**judgment**", conditions or practices observed, indicate that any food, drug, device, or cosmetic have been adulterated or are being prepared, packed, or held under conditions whereby they may become adulterated or rendered injurious to health."[11] (emphasis duplicated from source). This means that 483 observations involve the application of judgment, and therefore involve an element of subjectivity. Investigators are expected to document their observations and provide supporting evidence, but the 483 observations are by their nature based on initial observation and conclusionary. For this reason, EIRs, which include full descriptions of the observations cited and links to supporting documentation, are carefully reviewed before any decision is made to escalate the agency's response. The existence of the observation does not constitute a final agency conclusion until the EIR is written and fully reviewed, usually a multidisciplinary review from a technical, policy and legal perspective.

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[10] FDA, Investigations Operations Manual, Section 5.2.3, accessed at https://www.fda.gov/media/76769/download.

[11] *Id.*

The usual first step in escalation from the 483 is to issue a Warning Letter. FDA's stated policy is that a Warning Letter is not a final agency determination of noncompliance[12]. The FDA Regulatory Procedures Manual states in this regard "*A Warning Letter is informal and advisory. It communicates the agency's position on a matter, but it does not commit FDA to taking enforcement action. For these reasons, FDA does not consider Warning Letters to be final agency action on which it can be sued.*" The purpose of a Warning Letter is twofold: (1) stimulate the recipient to take effective voluntary action to correct objectionable conditions and practices and (2) to serve as prior notice in the event escalation to a more formal administrative or judicial sanction is needed to bring about lasting correction. Warning Letters are automatically posted to the FDA Web Site in a dedicated domain at https://www.fda.gov/inspections-compliance-enforcement-and-criminal-investigations/compliance-actions-and-activities/warning-letters.

The concept of "adulteration" is an important one under the FDCA regulatory scheme. There are many ways in which a drug product may be deemed to be adulterated as defined in the FDCA (*see* 21 USC § 351, *et seq.*). It is important to note that while the term "adulteration" includes actual contamination (chemical, microbiological, foreign matter, etc.) as one way in which a drug product may be deemed adulterated, there are also other ways. For example, if a drug product fails to meet one of its quality specifications, such as potency, dissolution, content uniformity, etc. it may be deemed adulterated. Contamination is therefore one category of adulteration, but not the sole category. Additionally, if the drug is prepared, packed or held under conditions that do not comply with current good manufacturing practice, it is deemed to be adulterated despite the absence of any other criteria [*see* 21 USC § 351(a)(2)(B)].

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[12] FDA, Regulatory Procedures Manual, Chapter 4, Section 4.1, accessed at https://www.fda.gov/media/71878/download.

Adulteration that is established by virtue of failing to meet a specification is covered separately in the FDCA for drugs depending upon their status as compendial drugs [those listed in the US Pharmacopeia, *see* 21 USC § 351(b)] or non-compendial drugs which are the subject of an approved New Drug Application (NDA) or Abbreviated NDA (ANDA) [*see* 21 USC § 351(c)]. Until a specification is established, adulteration under these sections cannot be said to have occurred. Once a specification is in place, either via a compendial monograph revision or approval of an NDA, ANDA or supplement thereto, and there are findings that demonstrate such specification is not met, then adulteration on this basis is established. I am unaware of any situation in which FDA found product that was in channels of distribution to be adulterated based upon failure to comply with a specification changed subsequent to such distribution if the product was within its approved specification limits at the time it was distributed. In my opinion, a product that meets all approved specifications cannot be deemed adulterated at the time of distribution, and there is no basis I am aware of for FDA to charge adulteration on that basis retroactively if the specification changes later[13].

FDA has a complex system for vetting of cases prior to taking regulatory action, whether such action is advisory, administrative, civil or criminal. Pharmaceutical GMP inspections are generally conducted by employees of the Office of Regulatory Affairs ("ORA"). Establishment Inspection Reports and accompanying evidence are reviewed by officials in ORA and within the Center for Drug Evaluation and Research ("CDER") when enforcement action is contemplated. In drug GMP matters, CDER officials are ordinarily the final agency arbiters of whether enforcement action is warranted, and what type of action that will be. FDA's Office of Chief Counsel may also review the matter for legal sufficiency, and if civil or criminal judicial action is

[13] *See* 21 USC §§ 351(b), (c).

recommended, the Department of Justice, Office of Consumer Protection reviews the case prior to referral to a United States Attorney's office for filing.

The FDA can take or recommend a wide range of advisory, administrative or judicial actions under the FDCA. These range from advisory warnings to civil sanctions (seizure of violative product, injunctions to restrain ongoing violations) and criminal charges at either the misdemeanor or felony level, depending on the facts of each case. The FDCA recognizes that the facts sometimes may reflect that minor, technical violations exist which would not necessarily justify one of the civil or criminal sanctions. To that end, Section 306 of the FDCA (21 USC 336) states:

> "§336. Report of minor violations
>
> Nothing in this chapter shall be construed as requiring the Secretary to report for prosecution, or for the institution of libel or injunction proceedings, minor violations of this chapter whenever he believes that the public interest will be adequately served by a suitable written notice or warning."

[redacted]

C. Current Good Manufacturing Practice (GMP or CGMP)

The FDCA provides that a drug (or a medical device) shall be deemed to be adulterated if it is manufactured under conditions which do not comply with "current good manufacturing practice" (GMP or CGMP)[14]. GMP is important because testing alone does not provide adequate assurance of quality, since it is based on a sample of a quantity of material. Most testing is destructive; hence 100% testing of a batch of drug product could leave no product for

[14] *See* 21 U.S.C. § 351(a)(2)(B).

administration, therefore testing 100% of a batch of drug product is not feasible. Compliance with GMP helps to "close the gap" between absolute assurance of quality and the level that can be assured by testing alone. Testing is part of GMP, but the additional controls GMP requires add an important level of assurance to what can be attained through testing. The failure to follow GMP may establish adulteration under 21 U.S.C. § 351(a)(2)(B). It is not necessary for the FDA to demonstrate that a product is also adulterated because of demonstrable contamination, failure to meet a specification, or any other physical form of adulteration.

When the GMP requirement was first enacted in 1962, as part of what were termed the Kefauver-Harris amendments to the FDCA, GMP was only required for drugs. In 1976, Congress extended the concept to include medical devices when it passed the Medical Device Amendments to the FDCA. Subsequent amendments have altered the wording of both the drug and device GMP requirements somewhat. Today, the FDCA establishes the GMP requirement for both drugs and medical devices.

The FDCA itself does not define the words "current" or "good" specifically. Addressing this, the FDA Commissioner explained in the *Federal Register* preamble to the reissuance of the drug GMP regulation in 1978[15]: "*Congress did not require that a majority or any other percentage of manufacturers already be following the proposed mandated practices, as long as it was a current good manufacturing practice in the industry, i.e., that it had been shown to be both* ***feasible and valuable*** *in assuring drug quality.*" (emphasis supplied). Thus, where the statute and regulations are not specific, the interpretation of what constitutes "current, good" practice may be viewed as that which is "feasible and valuable". In considering my opinion in this matter, I kept this principle in mind.

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[15] *Federal Register*, Vol. 43, No. 190 at 45014, 45018 (Sep. 29, 1978).

In a 1973 ruling in *United States v. Article of Drug Labeled "White Quadrisect"*, 484 F.2d 748 (1973), upholding an FDA seizure action brought solely on the basis of a failure to comply with GMP (no evidence of contamination or failure to meet specifications) the Court of Appeals for the 7th Circuit concluded that the terms "current" and "good" were well understood by the industry and thus not unconstitutionally vague or overly broad. The Court also noted that under the FDCA, evidence showing failure to comply with GMP was sufficient to result in product adulteration.[16] Today, GMP is a well understood concept in the pharmaceutical industry, both domestically and internationally.

The FDCA also grants the FDA (via the Secretary of Health and Human Services) the authority to promulgate regulations "for the efficient enforcement of the Act" [*see* 21 USC § 371(a)]. Under this authority, FDA has promulgated GMP regulations governing drug products in general (21 CFR § 210) and finished pharmaceuticals specifically (21 CFR § 211), which provide further detail as to what constitutes "current, good" manufacturing practice. The drug GMP regulations were first promulgated on June 20, 1963 as 21 CFR Part 133, then re-promulgated and re-codified in 1978 as 21 CFR Parts 210 and 211, with major changes in scope and content.

The drug GMP regulations at 21 CFR Part 211 pertain to *finished drug products*, that is, those in a form suitable for administration to a patient. There are no binding FDA GMP regulations for Active Pharmaceutical Ingredient (API) manufacturing, but the general requirement to follow

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[16] "The GMP provision stems from congressional concern over the danger that dangerously impure drugs might escape detection under a system predicated only on seizure of drugs shown to be in fact adulterated. In order to insure public safety, Congress determined in 1962 that it was necessary to regulate the means of production themselves: "A drug ... shall be deemed adulterated ... if... the methods used in, or the facilities or controls for, its manufacture, processing, packing, or holding do not conform to or are not operated or administered in conformity with current good manufacturing practice to assure that such drug meets the requirements of this chapter as to safety and has the identity and strength, and meets the quality and purity characteristics, which it purports or is represented to possess...." 484 F.2d at 749.

GMP, prescribed at the level of the FDCA, does apply to APIs since APIs meet the statutory definition of a drug. 21 CFR § 210 also applies to APIs, since it is not specific to finished products, but 21 CFR § 210 contains little to nothing addressing operational specifics of GMP. For APIs, there is a highly influential and widely followed international guideline, International Council for Harmonization (ICH) Guideline Q7 ("ICH Q7")[17], which is regarded industry wide as the global GMP standard for active pharmaceutical ingredients. ICH Q7 has also been formally adopted as agency guidance by the FDA. As guidance, the document is non-binding on the industry, however, in my experience it is treated by API manufacturers as if it was a binding regulation.

GMP is a dynamic concept which evolves as technological changes occur and impact what is both feasible and valuable in ensuring drug quality. To remain compliant requires continuing vigilance and education on the part of companies engaged in pharmaceutical manufacturing. To this end, GMP regulations require initial training and also continuing education in order to make sure conceptual understanding is maintained [*see* 21 CFR § 211.25(a)].

It is important to note that GMP is considered to be a minimum standard[18]. The FDCA and the GMP regulations do not hold companies to "best practices" or any sort of "gold standard", but rather, to a system of controls that is deemed to be the minimum that needs to be done. In the *Federal Register* preamble accompanying the publishing of the final version of the GMP regulations[19], the FDA Commissioner discussed this distinction in Comment #34:

> "[T]he legislative history of the Drug Amendments of 1962 shows that §501(a)(2)(B) of the act was included to raise the standards of drug manufacturing by all manufacturers to the level of the current good manufacturing practice in the industry. ... The purpose of §501(a)(2)(B) of the act is to provide assurance that drug product

[17] Formerly titled as "Q7A", the "A" was dropped and the document is now known as "Q7", the seventh is a series of ICH Quality guidelines.
[18] *See* 21 CFR § 210.1(a).
[19] *Federal Register*, Vol. 43, No. 190, at 45014, 45020 (Sep. 29, 1978), response to comment #34.

> quality would not fall below that which was feasible and available under contemporary technology. There is no implication that the standards represented by these regulations are less than acceptable or below the industry's norm. On the other hand, there is no prohibition in the regulations against the manufacturing of drug products using better, more efficient, and innovative methods. In fact, the Commissioner encourages use of such methods because it benefits the consumer. Although the word, "minimum" does not appear in §501(a)(2)(B) of the act, its use is necessary in the CGMP regulations because of their binding legal nature …that is, *failure to meet the minimum standards of the regulation results in the product's being adulterated.*" (emphasis supplied)

In other words, in order to reach a conclusion that a product is adulterated by virtue of failing to comply with GMP, FDA must prove that the conditions of its manufacture do not meet minimum standards. Failing to meet a standard that is above that level, in and of itself, does not support a finding that a product is adulterated.

Since it would not be feasible for FDA to promulgate a regulation that would be clear and specific for every conceivable situation in pharmaceutical manufacturing, the regulations for finished pharmaceuticals, and parallel guidance for API, require that each company develop written procedures that take into account how to best control risks in specific contexts, and that once such procedures are in place, that they be followed.[20] Document hierarchies in place at many companies use varying nomenclature for "written procedures", most commonly, Standard Operating Procedures or "SOPs", but sometimes written procedures may go by other names such as Work Instructions (WIs), Job Aids, etc. In this declaration, whenever the terms "SOP" or "procedure" are used, the intended reference is to the "written procedures" required by GMP regulations. The name of the document is not important, if it describes how to properly perform an operation, and is in written form, it meets the intent of the GMP requirement for a "written procedure".

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[20] *See* 21 CFR § 211.100(a) and ICH Guideline Q7 section 6.10.

D. Role of the Quality Unit Under GMP

The Quality Unit of a drug manufacturer has a pivotal role in GMP compliance. (At the time of promulgation of the current version of the GMP regulations in 1978, the term "Quality *Control* Unit" was used and persists in the wording of the regulation today, however, as practice has evolved over the ensuing years in the industry, the word "control" has been dropped in common usage. Therefore, in this declaration, the term "Quality Unit" shall be used to mean "Quality Control Unit" as stated in the GMP regulations.) Due in part to the diversity of dosage forms, processes, scale of operations and risk factors, application of GMP in any specific context requires a degree of judgment. The regulations contemplate this in many sections by requiring that decisions be based upon sound science, and that responsibility and authority for final decision-making be vested in the Quality Unit.

The GMP regulations establish the role of the Quality Unit at 21 CFR § 211.22, with other references to its role and authority in certain other sections. In summary, the Quality Unit must exist, even if it consists of only one part time individual, and it must have the responsibility and authority to carry out certain specified functions, e.g., "*[t]o approve or reject all components, drug product containers, closures, in-process materials, packaging material, labeling, and drug products, and the authority to review production records to assure that no errors have occurred or, if errors have occurred, that they have been fully investigated. The quality control unit shall be responsible for approving or rejecting drug products manufactured, processed, packed, or held under contract by another company.*" [21 CFR § 211.22(a)]

The GMP regulations do not prescribe a particular organizational structure or managerial reporting relationship for the Quality Unit, however, it is common industry practice to have the leader of the Quality Unit report to a very senior level, often the President or CEO of the company, but in any case, not to an individual whose activities are overseen by the Quality Unit. This is

done to minimize the potential for undue influence or conflict of interest in Quality Unit decision-making, preserving the integrity of the unit's final authority contemplated in 21 CFR § 211.22. Even though the regulations are not prescriptive on this point, organizational independence of the Quality Unit is a widely followed practice in the pharmaceutical industry.

E. GMP as Applied to Active Pharmaceutical Ingredients (API)

API meet the definition of a "drug" in the FDCA[21], which does not distinguish between API and finished drug products. Therefore, the requirement to comply with GMP applies to API at the statutory level[22]. However, the GMP regulations at 21 CFR Part 211 are binding only for finished drug products. There are currently no FDA regulations specifying what constitutes GMP for API.

In Compliance Program 7356.002F, "Active Pharmaceutical Ingredient (API) Process Inspection"[23], FDA states in part:

> APIs are subject to the adulteration provisions of Section 501(a)(2)(B) of the Act, which requires all drugs to be manufactured in conformance with CGMP. No distinction is made between an API and a finished pharmaceutical in the Act and the failure of either to comply with CGMP constitutes a violation of the Act. FDA has not promulgated CGMP regulations specifically for APIs or drug components (as we have for finished pharmaceuticals). Thus, the use of "CGMP" in this document refers to the requirements of the Act rather than the requirements of 21 CFR Parts 210 and 211 regulations for finished pharmaceuticals.
>
> FDA has long recognized that the CGMP requirements in the good manufacturing practice regulations for finished pharmaceuticals (21 CFR Parts 210 and 211) are valid and applicable **in concept** to Active Pharmaceutical Ingredient (API) manufacturing. These concepts include, among others, building quality into the drug by using suitable equipment and employing appropriately qualified and trained personnel, establishing adequate written procedures and controls designed to assure manufacturing processes and controls

[21] 21 USC § 321(g).
[22] 21 USC § 351(a)(2)(B).
[23] Current version dated September 11, 2015.

> are valid, establishing a system of in-process material and final drug tests, and ensuring stability of drugs for their intended period of use. In 2001, FDA adopted an internationally harmonized guidance to industry on API CGMPs in conjunction with regulatory partners in the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH). This guidance is ICH Q7A[24], Good Manufacturing Practice Guidance for Active Pharmaceutical Ingredients. ICH Q7A represents the Food and Drug Administration's (FDA's) current thinking on CGMPs for API's. Thus, API and related manufacturing and testing facilities that follow this guidance generally will be considered to comply with the statutory CGMP requirement. However, **alternate approaches may be used** if such approaches satisfy the requirements of Section 501(a)(2)(B) of the Act as long as the approach ensure that the API meets its purported or represented purity, identity, and quality characteristics. (emphasis supplied)

The lack of a binding regulation increases the need for the FDA to carefully balance scientific, legal and policy factors in each case in order to reach a defensible position about the significance of GMP inspection observations that arise in an API manufacturing context.

V. GMP Compliance Status of Zhejiang Huahai Pharmaceutical Co. Ltd.

The opinions expressed herein are based solely upon review of documents as listed in Exhibit B of this declaration. At no time did I personally visit any ZHP location, nor did I interview any ZHP staff. The time period to which the opinions expressed herein apply are from approximately August of 2013 until October of 2019 unless otherwise stated.

At the conclusion of an FDA inspection, the FDA-483 is issued to top management (if there are observations). Subsequently, the FDA employee(s) conducting the inspection prepare an Establishment Inspection Report (EIR) expanding upon the findings on the 483, and supporting those findings with evidence obtained during the inspection. Other sections of the EIR develop evidence of individual (personal) responsibility for the observations, and include other ancillary

[24] Renumbered as "Q7" since the issue date of this FDA reference.

information. The EIR is then reviewed in combination with reports of analysis of any related samples collected during the inspection, and a decision as to next steps, if any, is made.

[redacted]

[25] Accessed at https://datadashboard.fda.gov/ora/index.htm.

[redacted]

[redacted]

[27] (1) Quality System, (2) Facilities and Equipment, (3) Production, (4) Materials, (5) Packaging and (6) Labeling and Laboratory Controls.

[28] FDA, Compliance Program, numbers 7356.002 and 7356.002F, accessed at https://www.fda.gov/drugs/guidance-compliance-regulatory-information/drug-compliance-programs/.

[29] Accessed at https://www.fda.gov/media/83055/download.

[redacted]

[30] Accessed at https://www.fda.gov/media/121512/download.

[redacted]

[31] *See* 21 CFR § 211.100(b).

[redacted]

[32] United States Pharmacopeia.

[redacted]

[33] FDA, Compliance Program 7356.021, accessed at https://www.fda.gov/media/82096/download.
[34] Criteria are published in FDA Compliance Program 7356.002, "Drug Manufacturing Inspections", Part V, "Regulatory / Administrative Strategy", accessed at https://www.fda.gov/media/75167/download; also FDA, Field Management Directive (FMD) number 86, accessed at https://www.fda.gov/media/87643/download.

[redacted]

[redacted]

[35] Accessed on the FDA web site at https://www.fda.gov/media/75167/download.
[36] Accessed on the FDA web site at https://www.fda.gov/media/75201/download.

[redacted]

[37] Accessed on the FDA web site at https://www.fda.gov/media/121512/download.

[redacted]

[38] FDA, Regulatory Procedures Manual, Chapter 4, Section 4-1-8 Paragraph (2), accessed at https://www.fda.gov/media/71878/download.

[redacted]

[redacted]

[redacted]

[40] *See* FDA, Inspections, accessed at https://datadashboard.fda.gov/ora/cd/inspections.htm.

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[redacted] rphs, [redacted]

[redacted]

41 [redacted]

[redacted]

[42] *Id.*
[43] *Id.*

[redacted]

[44] *Id.*
[45] *Id.*
[redacted]

[redacted]

VI. REVIEW OF EXPERT DECLARATION OF JOHN L. QUICK

I have reviewed the Expert Declaration of John L. Quick filed in this matter dated November 7, 2021. Because my involvement in this matter is only with respect to ZHP, and Mr. Quick's declaration involves other companies, I did not review the declaration in depth regarding those other companies. Mr. Quick's declaration begins dealing with other companies at

[redacted]

[48] Accessed at https://www.fda.gov/media/71878/download.

paragraph 129, therefore, I limited my review to Mr. Quick's comments and opinions about the FDA regulatory system in general, and ZHP in particular, which ends at paragraph 128. To that extent, I have the following clarifications and/or differences of opinion to offer.

Paragraphs 21 – 30: In this section, Mr. Quick recaps some of the statutory elements of adulteration and misbranding, including the GMP requirement, but does so in a way that is somewhat superficial and reflects a lack of depth of understanding of how FDA applies these provisions. For example:

- In Paragraph 21, Mr. Quick states that "The FDA has defined 'adulterated' drug products in 21 U.S. Code §351." In fact, it is the Congress, not the FDA, that wrote the statute. The FDA's job is to implement it, not dictate its contents. Moreover, the term "drug product" has a specific meaning[49], and the statute uses the broader term "drug" which includes both active drug substances and finished dosage forms;
- In Paragraph 22, Mr. Quick's quotation of the wording of 21 USC 351(a)(2)(B) omits the final sentence, added by the FDA Safety and Innovation Act (FDASIA) in 2012 under Title 7, Section 711 of that Act[50], thus the quotation is incomplete without so stating;
- In Paragraph 24, Mr. Quick correctly states, "Under the regulations, the actual product does not have to be actually contaminated if the product was manufactured in a facility that did not meet CGMP requirements *in such a way that the*

[49] *See* 21 CFR § 210.3(a)(4)

[50] SEC. 711. ENHANCING THE SAFETY AND QUALITY OF THE DRUG SUPPLY. Section 501 (21 USC § 351) is amended by adding at the end the following flush text: "For purposes of paragraph (a)(2)(B), the term 'current good manufacturing practice' includes the implementation of oversight and controls over the manufacture of drugs to ensure quality, including managing the risk of and establishing the safety of raw materials, materials used in the manufacturing of drugs, and finished drug products.".

manufacturer could not assure that their products met their specifications, as determined by the FDA." (emphasis supplied). With this emphasis, the point is correctly made that violations of CGMP must be substantive in order for FDA to decide to charge adulteration on that basis. That is exactly what the agency does, using a multidisciplinary review process to ensure that when adulteration is based on lack of GMP compliance, the conclusion is well justified;

- [redacted]

- In Paragraph 27, Mr. Quick cites to a general section of the FDCA on misbranding, Section 502 (21 USC § 352), annotated by footnote 7, which refers to a regulation

[21 CFR § 202.1(d)(5)(iii)], not the statute, and moreover, the cited regulation does not exist. 21 CFR § 202.1(d) has only two subparagraphs, (1) and (2), so it is unclear at best what Mr. Quick is pointing to here; and

- [redacted]

[redacted]

Paragraph 33: In this paragraph Mr. Quick quotes the FDA in what he describes as "its API Process Inspection Manual" (a reference to FDA Compliance Program 7356.002F) as stating "*FDA has long recognized that the CGMP requirements in the good manufacturing practice regulations for finished pharmaceuticals (21 CFR 210 and 211) are valid and applicable in concept to active pharmaceutical (API) manufacturing.*" This quote is accurate but out of context, and could lead a reader to conclude that the cited regulations are binding for Active Pharmaceutical Ingredients. In full context, the quote states "*APIs are subject to the adulteration provisions of Section 501(a)(2)(B) of the Act, which requires all drugs to be manufactured in conformance with CGMP. No distinction is made between an API and a finished pharmaceutical in the Act and the failure of either to comply with CGMP constitutes a violation of the Act. FDA has not promulgated CGMP regulations specifically for APIs or drug components (as we have for finished pharmaceuticals). Thus, the use of "CGMP" in this document refers to the requirements of the Act rather than the requirements of 21 CFR Parts 210 and 211 regulations for finished pharmaceuticals. FDA has long recognized that the CGMP requirements in the good manufacturing practice regulations for finished pharmaceuticals (21 CFR Parts 210 and 211) are valid and applicable in concept to active pharmaceutical ingredient (API) manufacturing. These concepts include, among others, building quality into the drug by using suitable equipment and employing appropriately qualified and trained personnel, establishing adequate written procedures and controls designed to assure manufacturing processes and controls are valid, establishing a system of in-process material and final drug tests, and ensuring stability of drugs for their intended period of use. In 2001, FDA adopted an internationally harmonized guidance to*

industry on API CGMPs in conjunction with regulatory partners in the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH). This guidance is ICH Q7, Good Manufacturing Practice Guidance for Active Pharmaceutical Ingredients. ICH Q7 represents the Food and Drug Administration's (FDA's) current thinking on CGMPs for API's. Thus, API and related manufacturing and testing facilities that follow this guidance generally will be considered to comply with the statutory CGMP requirement. However, alternate approaches may be used if such approaches satisfy the requirements of Section 501(a)(2)(B) of the Act as long as the approach ensure that the API meets its purported or represented purity, identity, and quality characteristics." (emphasis supplied). The important distinction here is that the GMP regulations at 21 CFR Part 211 may be used to guide an FDA Investigator's thinking, but only the statutory concept of GMP is enforceable, not the specific wording of the regulations. Mr. Quick does partially acknowledge this in paragraphs 35 and 36, however, in paragraph 35 he puts it as "*Finished Drug Products and APIs each have their own set of cGMP requirements.*" Strictly speaking, while finished drug products do have a "set of requirements", APIs are regulated by a broad statutory principle supported by non-binding guidance.

Therefore, I find the out of context quote potentially misleading as to the enforceability of 21 CFR Part 211 in an API setting.

Paragraph 91: A minor clarification here is that Mr. Quick lists "consent decree" as an action the FDA could take. Again, strictly speaking, FDA would in such an instance actually take a seizure action under 21 USC 334 or an injunction action under 21 USC 332 (or occasionally an action which combines both a seizure and adds a prayer for injunctive relief). I agree with Mr. Quick that the majority of such cases are ultimately settled by negotiation of consent decrees, but

the *action* the agency takes is one of the two cited civil actions. The consent decree is simply a common means of resolution, to avoid litigation.

Paragraph 93: Again, to clarify, the "OAI Decisional Letter" cited by Mr. Quick is not a final agency determination of non-compliance, despite the strong wording. These letters were put in place a few years ago to satisfy demand from the industry for greater transparency in the EIR evaluation process. It is a status update intended as a courtesy notification. OAI decisional letters are currently used only for drug GMP inspections, they are not used in other industries nor for other types of inspections such as Pre-Approval Inspections.

Paragraph 95: I have no disagreement with Mr. Quick regarding his comments about Warning Letters. I do think it is important to add that the FDA's formal position is that a Warning Letter is not a final agency determination of non-compliance[51] because it is merely advisory, and does not commit the agency to taking more formal action. The purpose of a Warning Letter is twofold: (1) stimulate voluntary compliance efforts by the recipient and (2) establish prior notice to enhance the FDA's position should escalation to a judicial action later prove necessary. While Warning Letters are reserved for matters of "regulatory significance"[52], they are specifically deemed not appropriate for highly egregious situations such as deliberate violations and matters involving a risk of serious injury or death[53]. In its Regulatory Procedures Manual, Chapter 4, Section 4-1-3 paragraph 1(iii), FDA states that one of the key criteria for issuance of a Warning Letter is that "*There is a reasonable expectation that the responsible firm and persons will take prompt corrective action.*" [redacted]

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[51] FDA, Regulatory Procedures Manual, Section 4.1.1, accessed at https://www.fda.gov/media/71878/download.
[52] *Id.*
[53] *Id.*

[redacted]

In fact, it has been clear since the original promulgation of the GMP regulation that FDA does not intend to be prescriptive about how the objectives of GMP are attained unless doing so is absolutely necessary. In the comment responding to question #3 in the preamble to the *Federal Register* announcement of the final version of the GMP regulation[55], the FDA Commissioner addressed this concept as follows:

> The Commissioner believes that, with relatively few exceptions, the CGMP regulations do describe "what" is to be accomplished and provide great latitude in "how" the requirement is achieved. For example, written records and procedures are required, but FDA will

[redacted]

[55] *See Federal Register*, Vol. 43, No. 190 at 45014, 45015 (Sept. 29, 1978), response to comment #3.

> recognize as satisfactory any reasonable format that achieves the desired results. Because of the need for uniformity in certain areas of the CGMP regulations that have presented problems in the past, however, there are some instances where it is desirable to specify the manner in which requirements are to be accomplished. In promulgating these regulations, the Commissioner carefully reconsidered the need for such specificity where it appears and adopted only those specific requirements that are fully justified.

While both the GMP regulation and ICH Q7 clearly contemplate the application of risk assessment principles, neither document sets forth what determines whether such assessment is "formal" or not. International Council for Harmonization (IICH) Guideline Q9, "Quality Risk Management" (cited by Mr. Quick in paragraph 47), which has also been formally adopted by FDA, is a widely accepted approach to risk management in the pharmaceutical industry. ICH Q9 also does not use the term "formal risk assessment"[56]. ICH Q9 does put forth a list of suggestions in Section 5, "Risk Management Methodology" for tools that may or may not be helpful, but does not mandate the use of any particular tool. Key quotes from the document that speak to the approach to be used include: "*It **might** be appropriate to adapt these tools for use in specific areas pertaining to drug substance and drug (medicinal) product quality.*" (emphasis supplied) The use of the term "might" clearly establishes this document as advisory, not prescriptive. Further, Section 5 also states in part "*Additionally, the pharmaceutical industry and regulators can assess and manage risk using recognized risk management tools and/ or internal procedures (e.g., standard operating procedures).*"

[redacted]

[56] ICH Q9 defines Quality Risk Management as "A systematic process for the assessment, control, communication and review of risks to the quality of the drug (medicinal) product across the product lifecycle."

[redacted]

Paragraphs 110 – 111 – 112: [redacted]

I respectfully disagree that the Quality Unit is required to "conduct" a risk assessment. Under GMP, the Quality Unit is responsible for assuring that deviations have been thoroughly investigated[61]. Neither 21 CFR Part 211 nor ICH Q7 require that the Quality Unit be responsible for *conducting* risk assessments, only that the Quality Unit have final review and approval authority[62]. When the current version of 21 CFR Part 211 was published in the *Federal Register*[63], the FDA Commissioner stated at comment number 89 in part: "*The CGMP regulations do not subordinate the quality control unit's authority and responsibility to any other unit. At the same time, the regulations regarding the quality control unit do not encroach upon the expertise or*

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[57] Procedure SMP-018.01.
[58] *Id.*, Sections 6.1.1, 6.1.5, 6.3.9.
[redacted]
[60] Quick Declaration, paragraph 112.
[61] 21 CFR § 211.192, ICH Q7 Section 2.22(4).
[62] *Id.*
[63] *Federal Register*, Vol. 43, No. 90, at 45014, 45033 (Sept. 29, 1978), reply to comment #89.

responsibility of other units in a firm and do not dictate the organizational structure of a firm. They simply require that the quality control unit have final responsibility for certain actions in the manufacturing process." GMP does not contemplate that the Quality Unit perform tasks and activities for which the expertise resides elsewhere. It simply requires that the Quality Unit provide a final, independent review.

[redacted]

Paragraph 114: [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

VII. CONCLUSION

Based on my education, training, knowledge, and experience, review of the documents discussed in this report, and the work conducted and outlined above, I hold the opinions expressed herein to a reasonable degree of certainty. I reserve the right to supplement these opinions as needed to reflect new information that I may receive or to respond to claims raised by other witnesses.

Sincerely,

David L. Chesney

Digitally signed by David L. Chesney
Date: 2022.01.12 19:09:40 -05'00'

David L. Chesney, MSJ

CHESNEY

EXHIBIT A

David L. Chesney, MSJ

Principal and General Manager,

DL Chesney Consulting, LLC

5 Stornoway Road, Cumberland Foreside, Maine 04110-1417

+1-603-395-8180

dlchesneyconsulting@comcast.net

SUMMARY OF EXPERIENCE:

Mr. Chesney is the Principal and General Manager of DL Chesney Consulting, LLC. Previously he served 23 years with the FDA, and 21 years with PAREXEL International, including 19 years leading the Strategic Compliance Consulting group within PAREXEL Consulting.

At the FDA, he advanced from Investigator to Supervisory Investigator and Director, Investigations Branch, working in the Boston, Seattle and Philadelphia District Offices. In 1991, he was appointed the District Director, FDA San Francisco District Office, where he served until joining PAREXEL in 1995. At PAREXEL. Mr. Chesney provided compliance consulting and training services to clients worldwide. For 19 years, he led the Strategic Compliance Consulting group, and also personally provided regulatory enforcement related consulting services to the pharmaceutical, medical device and biologics industries, plus technical assistance to legal counsel in various privileged matters.

Mr. Chesney holds a Master of Science in Jurisprudence (Pharmaceutical and Medical Device Law) and a Certificate in Health Care Compliance from Seton Hall University School of Law, a bachelor's degree in biology from California State University, Northridge and postgraduate credits in biology from California State University, San Diego.

Primary Expertise

- Experienced in GMP, GCP, QSR and Pharmacovigilance compliance, both pre and post-marketing.

- Development of corporate regulatory compliance strategy; management controls for regulatory compliance; analysis and development of quality assurance organizations and quality systems; laboratory controls; failure and deviation investigations; investigation and resolution of data integrity issues; drug safety and compliance with pharmacovigilance requirements; management of responses to regulatory inspections and enforcement actions; representation of clients to the FDA and assistance with FDA communications; training in FDA compliance topics.

- Specialized experience in providing adjunct services to Legal Counsel such as strategy for avoidance of regulatory sanctions; vacating consent decrees; assistance in internal investigations, resolution of whistleblower complaints, due diligence assessments, and other privileged and confidential matters. Experienced expert witness (deposition and live courtroom testimony).

- Highly experienced trainer and public speaker as an expert on FDA inspection and enforcement. Adjunct guest lecturer, Maine Regulatory and Ethics Training Center, University of Southern Maine/University of Maine School of Law, Portland, Maine.

PROFESSIONAL EXPERIENCE:

Principal and General Manager, DL Chesney Consulting, LLC
2016 - Present
Specializing in strategy level consulting services to senior management in the pharmaceutical and biotechnology industry in the areas of Good Manufacturing Practice, Good Clinical Practice and Pharmacovigilance compliance. Services include FDA inspection readiness and response to inspection observations; assessments of quality assurance systems and Quality Units; assistance to legal counsel and company leadership with FDA inspection outcomes, post-inspection correspondence and meetings, and remediation strategy development and implementation; training in GxP compliance areas and FDA inspection readiness, including education of executive management in understanding their responsibilities for compliance governance at the corporate level. Assistance to Venture and Private Capital companies with due diligence efforts surrounding product. facility and company acquisitions and investment opportunities. Highly experienced in providing adjunct services to legal counsel in privileged matters.

Vice President and Practice Lead, Strategic Compliance Services. PAREXEL Consulting, Waltham, MA
2004 - 2016

Personally provided consulting services and managed a group of over 50 subject matter experts who function as PAREXEL Consulting's subject matter experts in compliance strategy. The group is based throughout the US and in Europe. The focus is on GMP/GCP/GLP/QSR/MDR compliance, drug safety and post marketing reporting requirements, risk management, FDA communications and interaction, response to FDA enforcement sanctions such as Warning Letters and Consent Decrees of Permanent Injunction, data integrity assessments, and management controls for regulatory compliance .

Senior Director, Strategic Compliance Services, KMI, a Division of PAREXEL International, LLC, Waltham, MA,
1995 – 2004

Personally provided consulting services and directed a group of KMI Senior Compliance Consultants who function as KMI's leading experts in GMP, QSR, GLP and GCP compliance strategy and FDA inspection readiness.

FDA Experience

District Director FDA, San Francisco District Office, Alameda, CA
1991 – 1995

Directed over 180 FDA employees and managed all enforcement operations of the San Francisco District Office. Provided overall direction and management of FDA's inspection, compliance, laboratory analytical, public affairs, and administrative activities in Northern California, Nevada, Hawaii, and the Pacific Trust Territories. Represented the FDA before industry, professional, and academic groups as an expert on FDA inspection and enforcement matters. Coordinated Federal-State enforcement activities with FDA counterpart agencies at the State level. Served on the Field Advisory Committees to the Center for Biologics Evaluation and Research (CBER), Center for Veterinary Medicine (CVM), and the Office of Chief Counsel. Served as an Evidence Development Instructor for FDA at the national level.

Director, Investigations Branch, FDA; Mid-Atlantic Region (Philadelphia District Office) Philadelphia, PA
1988 – 1991

Directed a staff of approximately 50 investigators located in the states of Pennsylvania and Delaware. Participated in the development of the drug pre-approval inspection program. Completed FDA/ORA's Executive Development Program. Served as Evidence Development Instructor for the FDA at the national level.

Supervisory Investigator in Charge, FDA; Pacific Region (Seattle District Office) Portland, OR
1982 – 1988

Directed inspection and investigative activities of the FDA in Oregon and southern Idaho. Served as District level Evidence Development Instructor.

Supervisory Investigator, FDA; Northeast Region (New England District Office), Boston, MA
1977 – 1982

Supervised a group of FDA investigators and managed the biologic, medical device, and bioresearch monitoring (clinical compliance) programs.

Investigator, FDA; Northeast Region (New England District Office), Boston, MA
1972 – 1977

Conducted a wide range of investigations and inspections for the FDA, concentrating in drugs, biologics, GCP, GLP and medical devices.

EDUCATION:

Seton Hall University School of Law, Newark, NJ

- *Master of Science, Jurisprudence (Pharmaceutical and Medical Device Law), 2019*
- *Certificate in Health Care Compliance awarded 2008;*

California State University; San Diego, California

- *Graduate Study, Biology (two years full time)*

California State University; Northridge, California

- *Graduate Study, Biology (one year full time)*

California State University; Northridge, California

- *Bachelor of Arts in Biology (Chemistry Minor)*

ADDITIONAL / SPECIALIZED TRAINING:

Many years of FDA in-service training in several compliance areas: Food and Drug Law; Pharmaceutical Manufacturing; Pharmacology and Experimental Therapeutics; GCP; GLP; Blood Banking and Plasmapheresis, and a variety of related topics. (Complete listing available upon request.)

Completed the FDA/ORA Executive Development Program, 1990-91

LANGUAGE SKILLS:

English: Native
Spanish: Conversant but not fluent; good reading skills.

PROFESSIONAL ASSOCIATIONS:

- Parenteral Drug Association (Faculty, PDA Training and Research Institute)
- Food and Drug Law Institute (Instructor, FDLI *Introduction to Drug Law* course)
- Regulatory Affairs Professionals Society

PUBLICATIONS AND PRESENTATIONS:

Frequent public speaker at a wide variety of industry seminars and professional meetings for over 25 years (details available upon request). Multiple presentations for University of Georgia, Athens GMP conference; GMP by the Sea and other Pharmaconference events; Institute for Validation Technology, IPA Canada; FDA News Inspection Summit; PDA; ISPE; Southern California Chapter of AOAC, and other similar conference venues.

Faculty, PDA Training and Research Institute

Volunteer Instructor, *pro bono*, for the Food and Drug Law Institute program *Introduction to Drug Law*, 2014 - present

Published articles in several journals and newsletters including *FDLI Update*, Pharmaceutical Technology, BioPharm, ISPE and PDA Chapter newsletters, and the Journal of cGMP Compliance.

Co-author of Chapter 15, *Review of FDA Inspections and Related Regulations* in "A Practical Guide to Food and Drug Law and Regulation", Food and Drug Law Institute, 2020

Contributing author to "Fundamentals of Regulatory Affairs, the RAPS preparation guide for the Regulatory Affairs Certification exam", 1999-2002

Many other publications, listing available upon request.

AWARDS:

- FDA Award of Merit, FDA's highest award for individual achievement
- Several FDA Group Recognition Awards

PUBLICATIONS IN LAST TEN YEARS

- Tetzlaff, Ronald F. and Chesney, David L., "Review of FDA Inspections and Related Regulations", Chapter 15 of "A Practical Guide to FDA's Food and Drug Law and Regulation", Seventh Edition, 2020, Food and Drug Law Institute, Washington, DC

- Chesney, David L. "Executive Responsibility for Quality", in Quality Management Essentials: Expert Advice on Building a Compliant System, FDA News, Digital version ISBN: 978-1-60430-059-8

CHESNEY

EXHIBIT B

REFERENCES

1. Expert Declaration of John Quick, *In re: Valsartan, Losartan, Irbesartan Products Liability Litigation*, 1:19-md-2875-RBK, and documents referenced therein

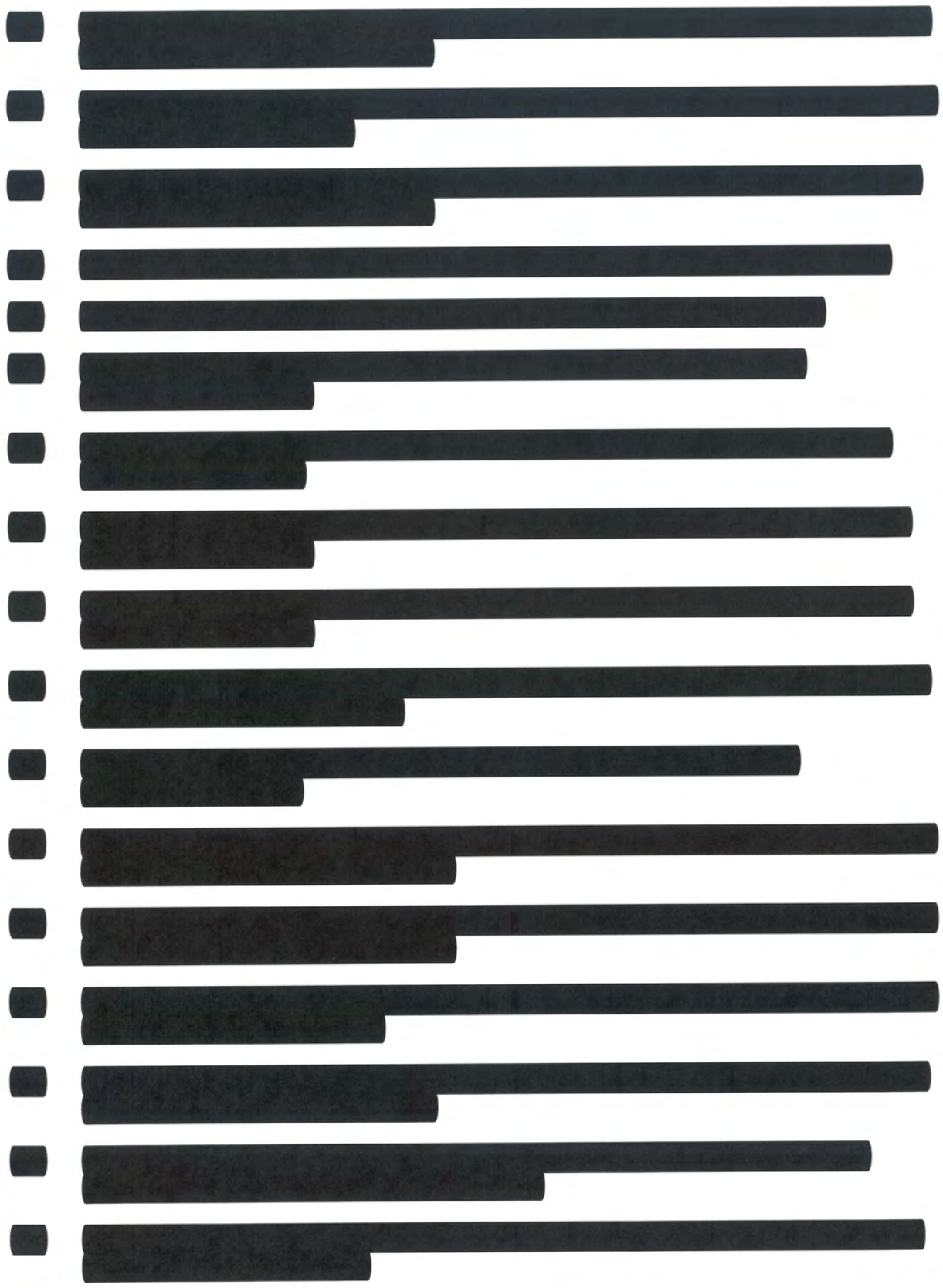
2. Expert Declaration of Rena Conti, Ph.D., *In re: Valsartan, Losartan, and Irbesartan Products Liability Litigation*, 1:19-md-2875-RBK

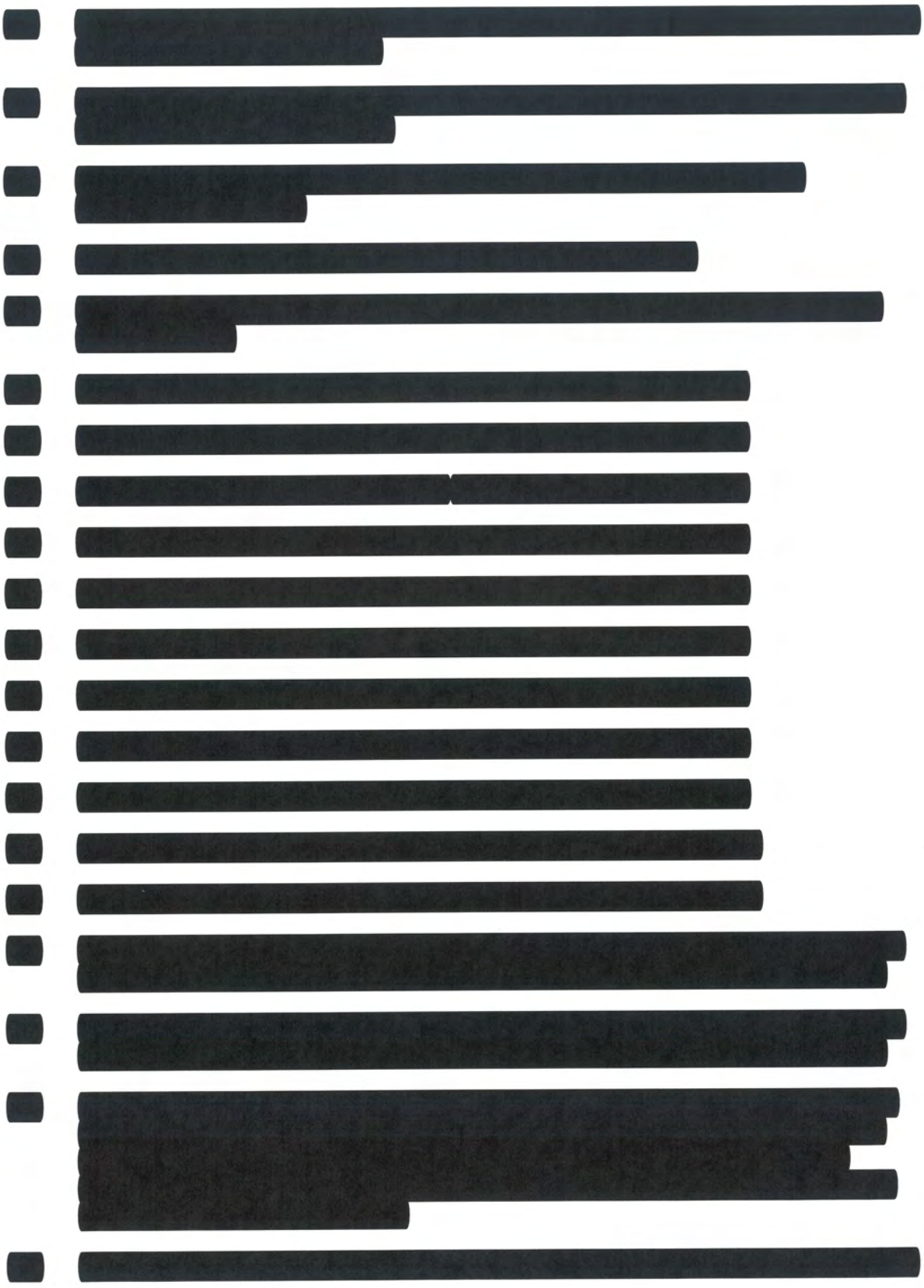
3. Plaintiffs' Memorandum of Law in Support of their Motion for Class Certification of Consumer Economic Loss Claims, *In re: Valsartan, Losartan, and Irbesartan Products Liability Litigation*, No. 19-md-2875-RBK

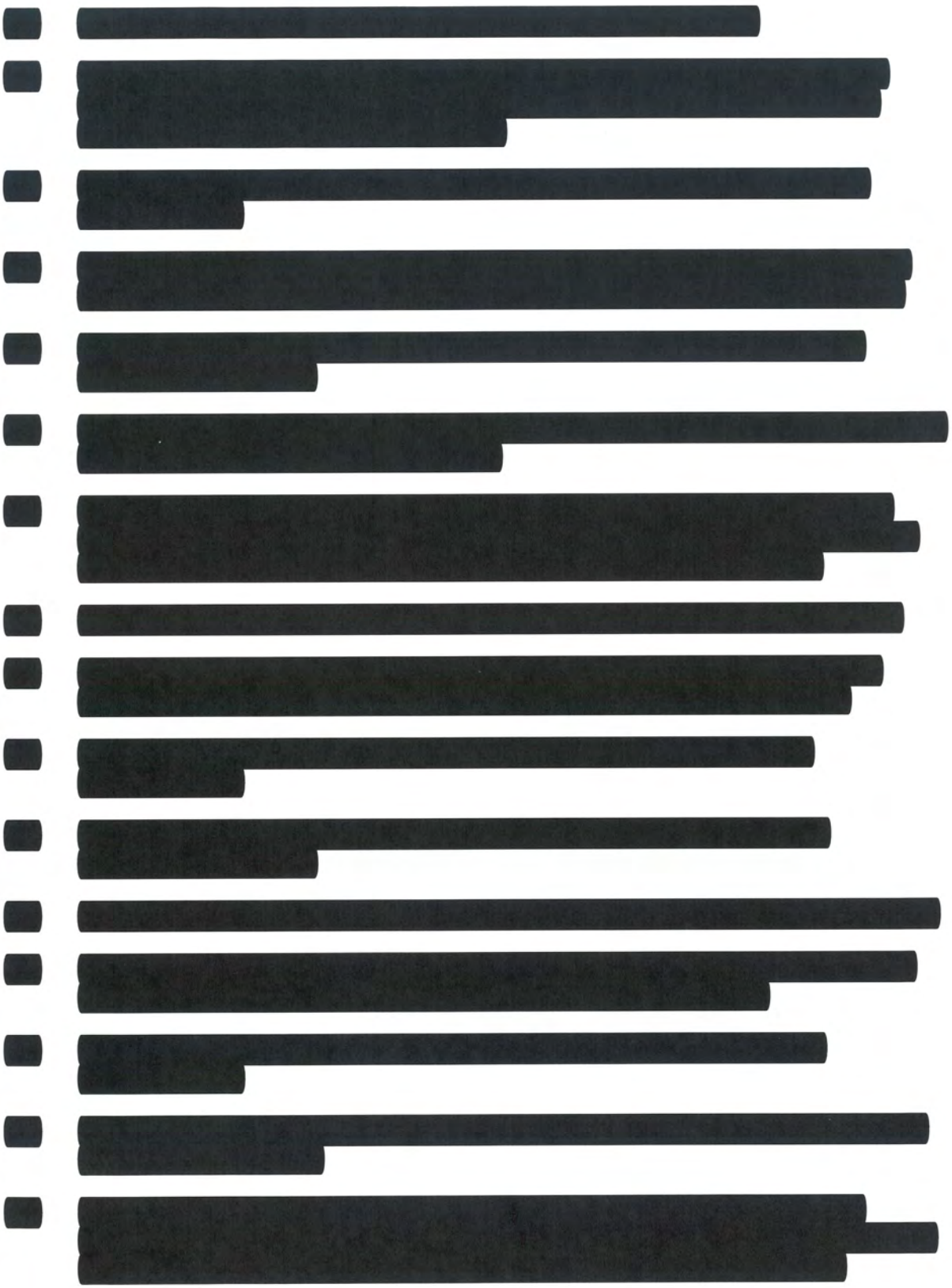
4. Memorandum of Law in Support of the Medical Monitoring Plaintiffs' Motion for Class Certification, *In re: Valsartan, Losartan, and Irbesartan Products Liability Litigation*, No. 19-md-2875-RBK

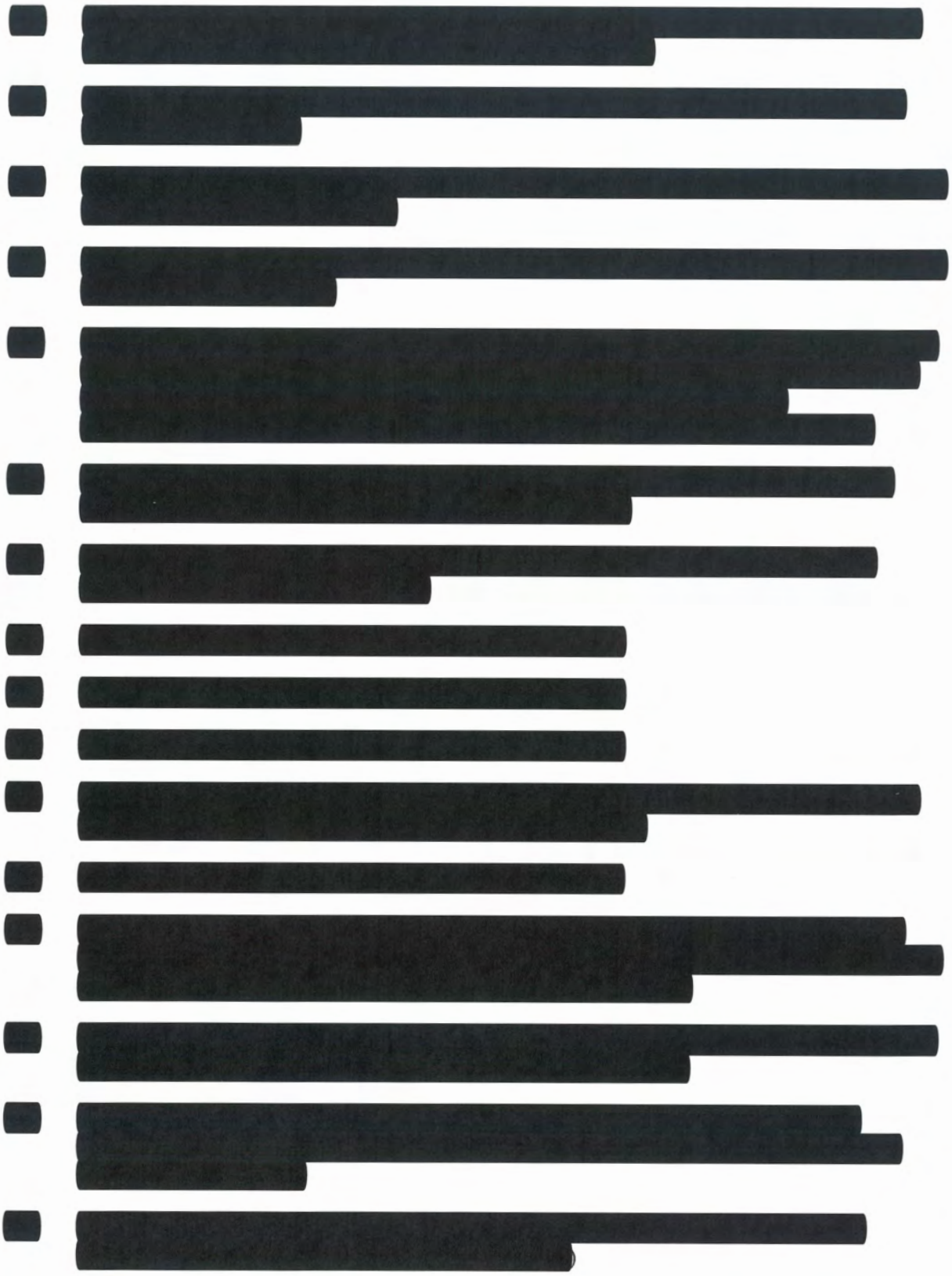
5. Third Party Payors' Brief in Support of Motion to Certify Class, *In re: Valsartan, Losartan, and Irbesartan Products Liability Litigation*, No. 19-md-2875-RBK

[redacted]









[redacted]

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